**Acting Out Part 1: Colored Pencils, Grid Paper**

Erik and Kim are actors at a theater.

Erik lives 5 miles from the theater and Kim lives 3 miles from the theater.

Their boss, the director, wonders how far apart the actors live.

* On grid paper, pick a point to represent the location of the theater.
* Illustrate all of the possible places that Erik could live on the grid paper.
* Using a different color, illustrate all of the possible places that Kim could live on the grid paper.
* What is the smallest distance, *d*, that could separate their homes? How did you know?
* What is the largest distance, *d*, that could separate their homes? How did you know?
* Write and graph an inequality in terms of *d* to show their boss all of the possible distances that could separate the homes of the 2 actors.

Group Checklist

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| --- | --- | --- |
| * 1. Did you pick a point to represent the location of the theater? | Yes | No |
| * 1. Did you show all the places that Erik could live in Erik’s color? | Yes | No |
| * 1. Did you denote what color Erik’s home was? | Yes | No |
| * 1. Did you show where Kim could live? | Yes | No |
| * 1. Is Kim’s color different than Erik’s? | Yes | No |
| * 1. Did you denote the smallest distance that could separate the homes? | Yes | No |
| * 1. Did you denote the largest distance that could separate the homes? | Yes | No |
| * 1. Did you write an appropriate inequality? | Yes | No |
| * 1. Did you graph the inequality? | Yes | No |
| * 1. Did you prepare your visual ? | Yes | No |